IN THE SENATE OF THE UNITED STATES.

LETTER

FROM

THE SECRETARY OF THE INTERIOR,

TRANSMITTING

A report of the Commissioner of Education upon the condition of the public schools in the District of Columbia.

DECEMBER 14, 1892.—Referred to the Committee on Appropriations and ordered to be printed.

DEPARTMENT OF THE INTERIOR,
Washington, December 13, 1892.

SIR: I have the honor to transmit herewith a report made by the Commissioner of Education, in accordance with a requirement of the act of Congress approved July 14, 1892, expressed in the following words:

The Commissioner of Education is hereby authorized and directed to examine and report to Congress, on the first day of its next session, on the schools of the District of Columbia, as respects their organization, efficiency, methods, and cost, and with said report make such recommendations as to him may seem advisable.

Very respectfully,

JOHN W. NOBLE,
Secretary.

The PRESIDENT OF THE SENATE.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, December 12, 1892.

To the Senate and House of Representatives of the United States of America in Congress assembled:

In compliance with a requirement of the act of Congress approved July 14, 1892, entitled "An act making appropriations to provide for the expenses of the government of the District of Columbia, for the fiscal year ending June 30, 1893, and for other purposes," which requirement is expressed in the following words:

The Commissioner of Education is hereby authorized and directed to examine and report to Congress, on the first day of its next session, on the schools of the District of Columbia, as respects their organization, efficiency, methods, and cost, and with said report make such recommendations as to him may seem advisable.

I have the honor to submit the following report and recommendations:

I.—General Survey.

According to data furnished by the board of trustees of the public schools of the District of Columbia, the schools of said District are organized into two divisions, the one including the schools for white children and the other the schools for colored children; the former under the superintendency of Mr. W. B. Powell, A. M., and the latter under that of Mr. G. F. T. Cook, A. M.

In the division for white pupils there were enrolled for the year ending June, 1892, a total of 25,188 pupils; in the division for colored a total of 14,490 pupils; making a grand total of 39,678. This number is about 16 per cent of the entire population of the District and shows a nearly equal representation of the youth of each race in the public schools. The average number belonging to school was 81 per cent of the entire number entered on the registers during the year, and the number in actual attendance averaged for the 185 days of the school year 75 per cent of all enrolled. This is a very fair record of attendance compared with other cities of the country.

The teaching force of the District amounts to 833, or counting the superintendents and their assistants, to 845 persons, of whom 562 are white and 283 are colored. As to sex, 734 are women and 111 are men. Of these again 675 are engaged in the work of teaching in the elementary schools, primary and grammar, 87 in the high and normal schools; 71 in teaching and supervising instruction in special branches, sewing, cooking, manual training, health, music, and drawing; finally, 21 in superintending the work.

Besides the day schools there is a system of night schools open for 58 nights for white persons unable to attend day schools, and 48 nights for colored persons. There are enrolled 1,344 white and 1,563 colored persons; the former are taught by 26 white and the latter by 29 colored teachers.

It appears from the data furnished by the trustees that the cost of instruction of all kinds, and of supervision for each pupil (based on average enrollment) was $18.20; for incidentals, including as chief items fuel and janitor hire, $4.59, making a sum total of $22.79 per year for each pupil getting 185 days of instruction. This, of course, gives for each one of the total enrollment of 39,678, whose average time of belonging to school amounted to 150 days, the sum of $18.46 as the yearly cost.

Comparing the average cost of tuition and incidentals in the District of Columbia with that in other large cities of the Atlantic coast region, the results per pupil appear as follows:

Cities.	Tuition.	Incidentals.	Total.
Baltimore	$16.89	$5.42	$22.31
Philadelphia	15.78	7.39	23.17
New York	21.95	6.96	28.91
Brooklyn	19.22	6.54	25.76
Providence	21.00	7.25	28.25
Worcester	19.08	5.84	24.92
Boston	24.94	9.55	34.49
Washington	18.20	4.59	22.79

It should be remembered that the statistics for New York include the cost of the evening schools assessed on the pupils of the day schools.

This exhibit shows that in the cost of tuition the District ranks as the fifth of eight cities named; in cost of incidentals, as eighth; in total cost, as the seventh.

Analyzing further the cost of tuition per pupil in the District the several items that enter it are as follows:

For teachers	$15.98
For supervisors	.715
For music	.166
For drawing	.256
For physical culture	.13
For manual training	.515
For sewing	.25
For cooking	.273

The opportunities open to a child of the District at school, stated in another form, cost about $16 a year for his regular teacher; 72 cents for the superintendence; 17 cents for special instruction, music; 26 cents for drawing; health lessons, 13 cents; manual training, 52 cents; sewing, 25 cents; cooking, 27 cents.

Looking at the data furnished to show the discipline of the schools, it is found that the average absence of those belonging to the high schools is 5 per cent of the white children and 4 per cent of the colored; in the grammar and primary schools, 8 per cent of white and 6 per cent of colored pupils. The number who come late to school (tardy) average 2,567 a month, giving for the year about 58 cases for each 100 pupils. This compared with other cities is a very good showing.

The schedule of salaries paid teachers is reported as follows:

Eighth year or grade	$950
Seventh year or grade	825
Sixth year or grade	775
Fifth year or grade	700
Fourth year or grade	650
Third year or grade	550
First and second grade (with increase of $25 each year up to a maximum of $500)	400

Here it seems that there is a regular progression in salary according to the grade—a distinction which seems to the undersigned to be not only not warranted for any reason of extra difficulty in teaching grammar-school pupils, but also to be vicious in many ways in the practical management of classes. The teacher holding the sixth-grade position would naturally guard her room jealously against the admission of any pupils from the fifth grade, justly fearing lest her title to the sixth-grade salary would be endangered. This causes the grades of pupils in the schools of the District to be sharply marked, not so much by degree of advancement in studies as by the room in which the pupils attend school.

It would be far better to classify the salaries of teachers by some other principle having first, second, third, etc., assistants, and allowing a building of eight rooms a certain quota of assistants of each of the higher grades, say one each of the first and second, and the remainder (six rooms) to be filled by assistants of the lowest rank. A twelve-room building would have two each of first and second assistants and the remainder (eight rooms) filled out with the lowest grade of assistants. This would be a step towards economy, and likewise a step towards paying better salaries for exceptionally difficult positions.

It will be found, upon experience, that with salaries at the same rate the teacher will generally prefer to teach the higher grade. To the average teacher there is something more attractive to be found in the

fifth, sixth, and seventh grade studies than in the work of the first and second. Of course, the studies of these grades have more variety; there is a monotony about the first year's work; it is over and over the first steps in reading and writing and numbers. In the higher grades the teacher fancies that she is gaining some advantage for herself in going over such branches as grammar, history, natural science, and literature. Accordingly, the better plan is to have salaries graded in such a way that the teachers who receive the first beginners, who ought to come into the hands of a skilled teacher at once, shall receive the pay of an assistant one rank above the lowest. If, for example, the lowest rank receives from $400 to $500, according to length of service, the teacher assigned for beginners should receive a salary from $500 to $600. The teachers up to the seventh grade in an eight-room school may receive only the lowest rank of salary, whatever that is. Then, there should be an assistant with higher rank, and for eighth-grade work another assistant two degrees higher than the ordinary assistant.

This plan, when adopted, would save something in salaries, and would save much more by the breaking up of the rigid system of grading by room occupied rather than by advancement in studies. This will be explained more fully under the head of grading and classification, to be found below.

II.—Discipline.

All systems of city schools lay a great deal of stress on what is called the discipline of the school. This includes behavior as its chief item, and it stands, on the whole, for the moral side of education in the school. It does little good to talk morals to young people if they are indulged in their whims and caprices. The most effective moral training is that which forms habits of doing and acting in such a way as to aid others—one's fellow-pupils and the teacher—in doing reasonable deeds. In order to combine with one's fellows, a pupil must be regular and punctual at school, industrious in learning his lessons, and careful not to interfere with others so as to prevent them from study. The discipline of the school requires a strict adherence to the forms of action that resemble those of a well-drilled company of soldiers. The pupil has two opposite kinds of activity, which he must learn to adopt and change with ease and rapidity. The first is the habit of individual industry, the absorption in his individual task, oblivious to all else that is going on around him, either on the part of teacher or fellow-pupil. To be able to concentrate one's mind on difficult subjects, in the midst of distracting environments, is a lesson of great value when learned.

The pupil must learn, besides this, to pass into another frame of mind when he comes to the class exercise (or recitation, as it is called). He must become alert and critical then. He must be attentive to the teacher's questions, to the answers of his fellow-pupils, and especially to the explanations of the teacher; for the great benefit of the class exercise over such instruction as one gets from a private teacher is to be found in the circumstance that one learns to see the topic of the lesson through the minds of his fellow-pupils and through that of his teacher. In his own preparation of the lesson the limitations of his mind had led him to misconceptions; these he sees corrected by his fellows and by the teacher. Other misconceptions are developed by his fellow-pupils, each one of whom has his own limitations of mind, not likely to

be found in the others; these are corrected, and each one learns as much by this process of revising the statements of others as by his own study.

Critical alertness, or the ability to watch with close attention the action of other minds, is a different kind of mental power from that kind of attention which shows itself in mental absorption in the subject itself.

Besides these two kinds of attention, which the good school develops in its pupils through its discipline, there are many other features of moral character that go to the making of a good citizen which are acquired at school. The pupil must be silent and refrain from whispering or talking; he must repress his tendency to prate or chatter; he must learn to hold back the fierce impulse to utter himself and wait for reflections to come to his mind.

The school has to repress the tendency to quarrelsomeness that perpetually develops at school and on the way to and fro.

The discipline in the schools of the District has been found by the Commissioner of Education to be worthy of high commendation. The order and attention observed by the pupils in most cases had evidently become habit and a matter of course.

In the three hundred rooms scattered over the city, which were visited by the Commissioner in person, he saw no case of corporal punishment and never once heard the teacher reprove a pupil for disorder. It is singular to note that the nearest approach to disorder observed was found in the rooms of the principals of the schools of eight and twelve rooms. The organization of the schools is such that the principal of a school must teach all of the classes of the highest room in the school, in addition to the regular work that the duties of principal impose upon him. He must see parents who visit the school to enroll their children or to consult in regard to behavior or progress in studies. He must supervise the general management of the entire building, outhouses, and playgrounds, and make reports to the superintendent. He must leave his room often and for a considerable portion of the day. His pupils (usually of the eighth grade) have more recitations than any other grade, and their class exercises ought each to be of greater length than in lower grades.

A teacher who should properly instruct the pupils of the room assigned to the principal would have more work than any other in the school. To add to this work the principal's duties is simply to rob the highest class of its needed instruction, or else to cause the whole school to suffer for the supervision needed of its principal. It was found in most cases that both discipline and instruction suffered in the rooms of the principals, and that the management of the school outside of the rooms at recess sometimes showed neglect.

The care of the water-closets is one of the most important items in this general management. One case was found where the place was too dark for the pupils to see the arrangements (the Weightman school). In a few other cases the water-closets were found in a state of great filth and disorder. But it is safe to say that three out of four were well cared for. The dry system of closets seems to be successful wherever used in the District.

As the school performs the highest function as a civilizer in a city, the Commissioner had this matter carefully inquired into. Besides this the playgrounds and basement rooms have been inspected.

School yards should be paved with brick over the entire surface. When this is not done, of course they can not be swept or washed.

The children at play stir up the dust and then breathe it, or wet their feet in the mud in rainy weather and bring much of it into the schoolroom.

The setting apart of play rooms in the basement of school buildings is a favorite device of school committees or boards of trustees. But such basement rooms become full of dust when the children play in them. The twilight that pervades such rooms, even if the worse evil of dust could be obviated, would be sufficient to condemn their use.

There remains in this matter much to be done in the District before the schools have proper provision for recess. In country schools the pupils are few, the playgrounds include a large environment of fields and highways, and there is no occasion for trampling the sodded ground until it becomes dust or mud. In the city school yard every square foot of it is trod upon by many pupils at each recess.

Discipline in a school, in order to be of the highest and most civilizing quality, must be secured without harsh means. The absence of the rod, and of scolding or menace has been mentioned as something worthy of note on the part of the visitor. The trustees of the District report for the past year an average of less than two hundred cases of corporal punishment in a month for the entire school system, or one case on an average per week for each 800 pupils. The colored schools, it seems, have one case, per week, for each 400 pupils, while the white schools have only one case to each 2,000 pupils.

III.—Grading and Classification.

The rigidity of systems of grades existing in the District has already been mentioned in connection with the schedule of salaries.

The ideal of the managers seems to be that an eight-room school should devote one room to each grade. But the schools of all cities show a much larger proportion of children in the lower grades than in the higher grades. By a "grade" is meant a year's work, according to the usually accepted technique. In the District, however, the eighth grade is said to include two years' work. If true, this would give nine years for the entire course of study below the high school. Now, the report of the trustees shows that the lower four grades of the white schools enroll 50 per cent more pupils than the upper four grades. Sixty per cent of the white pupils and nearly 75 per cent of the colored pupils are in the lower four grades (called primary grades). The proportion of primary pupils is much greater in some cities than even in the colored schools of the District. In St. Louis, for example, upwards of 80 per cent of the pupils were in the lower four years of work during the entire decade 1870–'80.

It is obvious, then, that in an eight-room school six or six and one-half rooms are needed for the lower four grades in the colored schools, while five are needed in the white schools, unless the primary rooms are crowded with 50 per cent more pupils than the grammar schools.

To force the eight grades to correspond to the eight rooms of a building is bad enough, but it is not the worst evil of the graded-school system as it exists in the District, and indeed in a majority of cities in the East. There is a year's interval between each class and the one below it. So great an interval prevents a healthful reclassification of pupils. There is a great difference between the capacities of children to learn. Those who enter the lowest grades at 8 years of age can, on an average, make double the progress in primary work over children of 5.

Besides, there is a difference due to temperament. Bright, nervous children will make far more rapid progress than stolid and dull children.

The school must provide for this difference in rates of development by frequent reclassification, or else become a sort of Procrustean bed. If the bright pupils are kept back for the slow and dull ones a double evil arises. The bright ones acquire loose, careless habits of study, for they do not have to work to one-half of their capacity to keep up with the others. The pupils of slower temperament are goaded and urged forward by their teacher to keep up with the best, and are constantly made conscious of their lack of wit, often by stinging sarcasms; they become discouraged and lose their self-respect.

Besides the difference of temperament and age, there is also the element of health to be considered as an active cause to produce difference in the rate of progress in studies. The sickly are irregular in their attendance. Some healthy children are irregular in attendance on account of the necessity of working for a living.

In the District these reclassifications are not made, but all of the pupils in the grade, no matter if there are enough pupils to form two or several classes, are kept at the same lessons in the course of study.

It is true that some attempt is made to provide for the glaring cases by transfer from one class to the next. But each transfer involves an omission on the pupil's part of the studies of an entire year. As near as can be ascertained, such promotions do not amount to 5 per cent of the pupils in any grade in the city.

The situation can be described in these words: The teachers are obliged to give most of their time to urging on the slower, less mature pupils of their classes, and the best pupils are much of the time in the attitude of idle and amused spectators. But this is only half of the result. The further consequence is that the most talented children are kept eight years on work that they can accomplish in six years or less. This so retards their preparation for college that only a few go from the public high school into higher institutions. Perhaps 5 per cent on an average pass from the secondary education of the public school into colleges and universities.

This defect in the grading and classification in the public schools of the District of Columbia is, as intimated, not something to be laid especially to the charge of the trustees, nor to the charge of the superintendent, for it is an evil common to the school systems of nine-tenths of the cities of the whole country. But the agitation of the question of the preparation of students for college which has been provoked in recent years is likely to produce a wide change in this part of public-school management.

The discovery of the importance of classification led in our cities fifty years ago to the present graded system. Before that time the ungraded country school had been the type. Instruction was for the most part individual and not class instruction. The introduction of six, eight, or ten grades of classification seemed to bring order out of chaos. But after a time the evils of the graded system began to make their appearance and many of the cities of the north central division of States subdivided their grades nearly twenty years ago and corrected the evils of holding back pupils of promising talent to the slower pace of their less gifted companions.

According to the plan carried out in Chicago and St. Louis, the pupils are allowed to devolop their differences of rate of progress due to maturity, regularity of attendance, degree of health, or to natural endowment, without being forced to remain an entire year in the same

class. Every ten weeks, or even oftener, a few of the pupils in the class, from one to half a dozen, who have begun to show capacity to do more work and learn longer lessons than are given to the average class, are called out and sent into the next class above. The same is done with the other classes. The classes are not a year apart not a half year. The intervals are ten weeks, more or less. A bright pupil who gets promoted over an interval of ten weeks' work, can sustain himself in the advanced class and does not lose a great amount of valuable work that he ought to have gone over. Whereas, if promoted over the entire work of a grade, as is done in some cases in the schools of the District of Columbia, there is, and remains, something of a hiatus in the matter of important studies omitted.

If the two classes which are formed in each room of the schools of the District were a half a year apart, instead of an entire year as at present, the facilities for reclassifying the more competent pupils would be more than twice as great as now.

It must be mentioned here that the schools of the District, since the abolition of all written examinations for promotion, do not hold back the dull ones of a class by sifting out the incompetent to so great an extent as formerly. The slow pupils are entirely kept out of the high schools of most cities by the strict entrance examination. In Washington they move forward on the regular current and enter the high school in large numbers. But next to nothing is done to emancipate the talented pupils from the yoke which forces them down to the pace set by their slow companions.

It would seem to a person well acquainted with the defects of the graded system as it exists, that the abolition of examinations for admission to the high school wrought some good for the District. A dull mind has now some chance of trying his intellect on those tools of thought which are able in some measure to make up for differences in talent. A dull boy who has struggled through quadratic equations in algebra, or learned to read Latin, or studied geometry, has by aid of those powerful instruments of research distanced all the talented boys of the grammar school. He can perform mental problems that they will never be able to solve until they invent or master such mathematical and philosophic instruments for themselves.

A boy put into algebra before solving the problems of higher arithmetic learns how to flank all such problems by a superior method. Doubtless, therefore, there is good in this phenomenal attendance on the high schools which the city of Washington shows. While the colored schools show exactly 3 per cent enrolled in the high and normal schools, the white schools show an enrollment in those schools of nearly 8 per cent.

Pupils who enter a high school without passing a strict examination, and are not thereafter accustomed to such strict examinations, will naturally fail of admission to college when submitted to tests that to them are unusual.

In the Central High School it will be easy to form division of such pupils as desire to enter college and comply with conditions necessary for fitting them to pass strict examinations. This may be done without losing any of the advantages gained by the disuse of entrance examinations formerly required for transfer from the grammar school.

The financial advantage to come to the District by the adoption of the system of grades or classes with semiannual or quarterly intervals will appear in the greater ease of filling up the rooms of the grammar grade to their full seating capacity. To fully understand this it is

necessary to remember that pupils are continually beginning school in the lower grades and as continually dropping out in the higher grades to go to work. The consequence is that the rooms in the primary grades that were full in the fall term are crowded to overflowing in the spring or summer term. The grammer grades were filled full in the fall and winter and are found to have grown thin in the spring and summer.

The continual promotion of the bright pupils from class to the next one above keeps the classes in the upper grades full all the year and thereby saves in the cost of tuition. As it is now the teachers who receive the highest salaries and possess most skill have the fewest pupils for the better half of the year.

Here may be seen the advantage of supplying an assistant to the principal's room, as proposed under a former head of this report. This may now be considered in connection with the whole problem of supervision.

SUPERVISION.

There should be two or three links to a perfect system of school supervision. One of these should be that of the supervising principal. The so-called supervising principals in the District of Columbia are in reality superintendents, and not principals at all.

The supervising principal ought to teach a regular class daily for not less than two nor more than four recitations (*i. e.*, four class exercises or lessons). The supervision of a superintendent is quite essential, but it is not of the same kind as that of the supervising principal. The latter is a teacher who teaches regularly every day and brings to his criticism of the work of his assistant teachers an element that the general superintendent can not furnish.

The supervising principal should visit every room under his charge at least twice every day. Some rooms he will visit oftener, for he will develop the power of turning all weak teachers into strong ones. This is a gift which no principal ever attains if he has to take full charge of a room.

Nor can a superintendent develop this power, for he can not devote enough time to a single school. The inspection of a general superintendent has in it valuable elements quite different from those which the principal can furnish. He sees the whole school in the perspective of the entire school system, and offers good advice from such a point of view. The principal can add the results of his own greater experience in solving problems of detail in the classes of his assistants.

In the visits made by the Commissioner and his assistants in preparing the material for this report, many schools were found in which the teacher had forgotten to arrange the blinds or window shades in such a manner as to admit a sufficiency of light. Earlier in the day the sun had shone directly on the pupils and the blinds had been closed to exclude the direct rays. Later the sun had left that side of the building altogether, and, as no change had been made in the blinds, the pupils were found sitting in the twilight as deep as that of a fashionable parlor.

Also many rooms were found in which the thermometer had not been recently consulted, and the heat was either too great or too little for the health of the pupils.

The plan which provides for assistant superintendents who go out from the central office and supervise the work of certain grades in the

entire city is better than the plan of district superintendents. This plan works well in New York, Indianapolis, and in many other cities.

COURSE OF STUDY.

In the visits of inspection made to the several schools of the city and county, it was generally seen that the methods of instruction in the branches usually taught in city schools are as good or better than the methods in vogue in other cities, while the discipline is, as already remarked, quite superior. Some teachers showed great skill in handling classes so as to bring out that critical alertness that has been described. In certain of the colored schools this was most remarkable. In other schools there was embarrassment visible in regard to the common branches, due, as it seemed, to an uncertainty as to the new branches of study and the proper amount of time and emphasis given them.

In reading, it is possible to say that in some schools there is a neglect of literary pieces for pieces of a scientific character. A book on hygiene comes in for a reading book, and is useful in its way, but does not answer at all as a substitute for the great prose and poetic selections from standard authors. One is reminded of Goethe's description of such scraps of scientific information: "They are like baked bread, good and sufficient for the day, but seed corn must not be ground in the mill." Literature contains the keys that unlock the aspiration of the youth; nothing else has this quickening power. A book like Rousseau's "Contract Social" could make a French Revolution. Homer's "Iliad" could make Alexander the Great subvert the old despotisms of Asia and establish in their places Greek art and science and free individuality; a speech of Daniel Webster, a poem of Longfellow or Tennyson may prove the impulse to a great career.

There is no need of asking the question, "Which is better to have in a course of study, literature or science?" for every school ought to have both.

Very good lessons in literature were seen in some of the schools. There seems to be a general effort in progress to accentuate this study, but the results had not yet come to full fruit.

Some very good language lessons were seen in both divisions of schools (white and colored).

Penmanship seemed to be taught with commendable care.

Arithmetic for certain of the grades is given double time. A lesson in "oral" (or mental) arithmetic reënforces another lesson in "written" arithmetic.

It is coming to be doubted by some of the best educators of our time whether arithmetic does not crowd out other more important branches. One lesson a day is enough for this branch, if taught skillfully.

Geography is taught with great stress on the structure and formation process of continents. This is a good thing, but not so important as political and social geography, which makes man and his commerce with his fellow-men the chief object of investigation.

From the point of view of physical geography, the north pole would be as interesting as England; but from the point of view of social and political and commercial geography, England and France and the United States would by far surpass the polar zone. It is just to acknowledge that the course of study prepared by Superintendent Powell recognizes the superior importance of social and commercial geography.

English grammar seems to be well taught, on the whole, and so, too, the history of the United States.

There is a tendency among the teachers to introduce grammatical distinctions into the lessons of the first, second, and third years, which is certainly a mistake. When a child first enters school he is put to the task of learning how to read. He must acquire the ability of recognizing in printed and written form the words addressed to the eye, which he has hitherto only known as sounds addressed to the ear. It is quite as great a step for him to take as any subsequent step he will ever encounter in the whole world of human learning. The child in the first year ought not to be pestered with other systems of conventional signs, nor with reflections on forms and distinctions such as grammar teaches. There should not be brought in his way even the simplest of them until the second and subsequent years.

MUSIC.

It seems that vocal music is almost entirely confined to the learning of musical notation. Even this is taught to pupils in the lowest grade while the pupil is taking the first step just described of learning to read from printed words.

It would appear that musical notation ought not to be begun until the third grade at the very earliest. The special music teacher ought to teach a large number of choice songs by rote, taking care to secure good expression from the pupils and to correct the errors which are always taking root in class singing.

Another very important reflection forced itself on the attention of the Commissioner and his assistants in this investigation. Special teachers should rarely if ever be employed for any other purpose than to reinforce the work of the regular teacher. The music teacher should instruct in new songs, correct bad tendencies, and chiefly by his lesson show the regular class teacher how to conduct the singing. So, too, in the case of teachers of drawing, sewing, physical culture, and one would be glad to add manual training and cookery, but can not at this stage of the development of those branches.

NATURAL SCIENCE.

The schools appear to be in a state of rapid progress as regards the teaching and learning of natural science. An admirable course of study has been prepared by Superintendent Powell. Its strong point is the biological method of study in botany and zoölogy. In the actual instruction in these branches, one saw some very fine lessons given and also some very poor ones. The work in physics seemed to be difficult. The disuse of text-books and drawings seemed to be carried too far in some cases, for an explanation of a pump or steam engine can be understood from an outline drawing far better than from a working model. The explanation of the model should have come after the comprehension of its principles by a study of a diagram.

A teacher is often deceived into supposing that a pupil understands a piece of physical apparatus merely because he can work it, while as a fact his scientific knowledge of its principles may be very small.

In chemistry the pupils seem to be making very satisfactory progress. The laboratories of the high schools are in good working order. An extensive apparatus for the study of botany and some branches of zoölogy is to be found at a central high school.

In drawing, the Commissioner's assistant, Dr. L. R. Klemm, notes the absence of a central controlling power. He calls attention again and again to the inaccuracy of the work observed by him both in the colored and in the white schools. The Commissioner is disposed to explain the defects in drawing by the too early neglect of exercises in drawing from the flat. Drawing has an alphabet which must be learned first before one can spell with it. Place a pupil before an object and tell him to draw it and he will not know what lines to use for this purpose unless he has learned by drawing from good drawings what lines produce the appearances desired. What raw pupil would know how to represent a cylinder or a sphere—what parts to shade and what parts to leave entirely blank—before he has learned this lesson by studying and reproducing good drawings given him?

After the alphabet of representing form is learned by copying a progressive series of drawing lessons the pupil should certainly be set at drawing from models.

With regard to the special branches, such as drawing, sewing, manual training, cooking, physical culture, and natural science, much allowance must be made for the fact that they are new and teachers have not yet had time to develop a series of graded steps by which to teach them to classes. The old branches—reading, writing, arithmetic, geography, and grammar—have been taught for five hundred years, more or less, and have been reduced to what may be called a "pedagogical form;" that is, to such a series of steps and half steps that the weakest pupils may be brought over the course by the use of sufficiently minute steps of progress.

COOKING.

It certainly is an important matter that every girl, rich or poor should know cookery as a science and as an art. If poor, she will at once put her knowledge to practical use at home or use her art to acquire a livelihood. If rich, she will not be at the mercy of wretched cooks, but will understand how to correct evils by a word here and there. The pupils in the cooking schools are taught important matters as to fuel and fire and its effects on different articles by boiling, roasting, etc. The chemical composition of the several articles of food is also taught.

MANUAL TRAINING.

In all of the schools of woodworking visited it was found that the lessons with the plane were a failure in the respect that the child had to learn a use of that tool that he must get rid of as a bad habit if he ever would become a skillful workman. The child's arm is too weak to learn how to use a plane correctly. He pares with it and jumps it over the middle of his board, cutting away at both ends. The bench for the children is too high for the youngest.

But the boys all seemed to have a great relish for their work and to get much good from the manual-training school. Indeed, with the exception of the experiments at planing all the work is hopeful, especially that with the turning lathe for wood and iron and with the shaping of iron at the forge.

A criticism suggested itself in the matter of working drawing, which ought to have been all made or at least copied by the pupils in order to fix clearly the ideals in their minds before trying to give shape to wood or iron. The manual-training school is an important instrumentality in reaching the population that comes from the slums of cities. Aside

from any practical skill that the boy may acquire, he certainly acquires a knowledge of the structure of machinery, and he is to live in an age of machinery in which his vocation is likely to be the control and management of a machine. The boy from the manual-training school can make a machine and can repair one that is disabled; he is fitted to take up and succeed in any industry that requires skill in machinery.

The suggestion already made to the effect that the regular teachers should gradually acquire the art of teaching most of their special branches may be repeated here as the foremost thought which occurs to one investigating the schools of the District of Columbia. If the special teachers reduce their branch of instruction to a pedagogical form and teach it to the regular teachers, the cost of these new and valuable adjuncts to instruction will continually grow less.

The schedule of salaries adopted in Washington must always bear some relation to the salaries paid men and women in the several Departments. When an ordinary copyist gets $900 a year, it can not be expected that a learned and skillful teacher can be obtained for $500. Many of the best clerks in the Government employ have been teachers.

In order to avoid mistakes in the location of new buildings, it is useful to have a block report once in two years. The principal of each school reports to the superintendent at the close of the year the number of children attending his school from each city block in his district. These reports when transferred to a large block map, letting each five pupils be represented by a stroke of the pen in the space representing the block, give a shaded map showing where the school population resides, and indicate the localities best adapted for new schools.

According to the report of the trustees the average number of pupils enrolled to a room is as follows:

Grade.	White.	Colored.	Total.
Eighth	48.4	51.7	49
Seventh	48.8	62	51.5
Sixth	47.9	53.5	49.1
Fifth	52.1	54	52.6
Fourth	53.9	58	55.2
Third	52.5	55.1	54.2
Second	50	54	51.7
First	62.7	58.2	60.5
County schools	50.7	52.6	51.6

These figures must be reduced to 81 per cent of their value to show the actual number of sittings that have to be provided for in the several grades.

CONCLUSION.

In conclusion it must be stated that all of the defects pointed out except the one in regard to intervals between grades or classes seem to be temporary and in process of remedy. All systems of schools that have any degree of vigor in their organization sway from side to side, or from extreme to extreme like other pendulum movements of reform in human society. A too great neglect of information studies and a too close adherence to reading, writing, and arithmetic lead to a strong accentuation of the other side, that of science, industrial training, and physical culture. If these again are pushed to extremes the pendulum swings back again. It does not appear that the schools of the District are at present in any dangerous neighborhood to an extreme, although, as has been intimated, the new branches of the course of study are not

yet fully advanced to a good pedagogical form, so that they can be taught in progressive lessons of sufficiently small compass to insure smooth progress on the part of the pupils not gifted for the work.

The great staple branches of the elementary school—reading, writing, arithmetic, grammar, and history—have not suffered materially by the introduction of the new branches, while on the other hand much has been gained in rendering the school system able to cope with the great problems of city growth, namely, the increase of the population of the slums, where crime and pauperism collect and breed.

There is one more need which ought to be supplied in order to cope with the city problem to the best advantage. There should be a kindergarten system in close connection with the primary schools.

It should receive children at the age of 4 years and train them into habits of neatness, cleanliness, politeness, gentle manners, and build a basis of self-respect at an epoch before the hardening process of city life sets in.

There are two classes benefited most by the kindergarten, the very poor and the rich. The child of poverty is made prematurely old by being obliged to shift for himself in the midst of selfishness and want. The child of the rich is born with unusual directive power inherited from his parents, who have risen to wealth by more than ordinary exertion. Being left to the care of nurses and governesses the precocious child learns to rule those set over him, and by the time he has grown to school age he is a spoiled child, and later on he squanders the money inherited in riotous living and goes to an early grave. The most precious children, gifted with the largest directive power, are lost to society and produce as much injury to the community as the criminals of the slum. The old system of education does not reach the spoiled child of the rich or gather in the children of the slum at a sufficiently early age to cure them. Hence the kindergarten commends itself as an important member of a system of city schools.

An historical table furnished by the trustees of the District gives an exhibit of the comparative statistics of the schools for the past thirteen years, and is here appended for convenient reference.

All of which is respectfully submitted.

W. T. HARRIS,
Commissioner

Whole enrollment of pupils in white and colored schools, the number of teachers employed, the cost of tuition, and the amount expended for rent and sites and buildings for each year since the year 1880.

School year ending June 30—	Whole enrollment.						Teachers.		Cost, excluding rent and permanent improvements.			Amount expended for rent and sites and buildings.	
	First six divisions.		Seventh and eighth divisions.		Total.								
	Number.	Per cent of increase.	Number.	Per cent of increase.	Number.	Per cent of increase.	Whole number employed.	Increase.	Per pupil (based on whole enrollment).	Aggregate amount.	Per cent of increase.	Rent.	Sites and buildings.
1880	18,378	.....	8,061	.....	26,439	.....	434	....	$13.85	$366,199.51	.....	$28,908.35	$74,998.24
1881	19,153	4.2	8,146	1.05	27,299	3.2	461	27	13.96	381,314.19	4.12	26,506.11	103,416.91
1882	19,031	*a*.63	8,289	1.75	27,320	.....	485	24	14.57	398,254.54	4.44	26,472.57	253,609.73
1883	19,836	4.2	8,710	5.07	28,546	4.4	505	20	14.69	419,594.60	5.35	14,805.33	103,141.47
1884	21,221	6.9	9,167	5.25	30,388	6.4	525	20	14.31	435,032.79	3.67	8,742.50	103,563.94
1885	21,267	.21	9,598	4.7	30,865	1.5	555	30	15.21	469,550.51	7.93	7,060.00	118,400.00
1886	22,198	4.3	10,138	5.62	32,336	4.7	595	40	14.78	477,993.67	1.79	6,919.66	61,130.04
1887	23,973	3.9	10,345	2.00	33,418	3.3	620	25	15.23	509,194.01	6.52	7,354.00	73,085.34
1888	23,810	3.1	11,040	6.71	34,850	4.28	654	34	15.65	545,717.71	7.17	10,215.44	239,115.77
1889	24,594	3.2	11,170	1.17	35,764	2.62	693	39	16.62	594,774.73	8.98	14,832.00	332,312.44
1890	25,468	3.5	11,438	2.39	36,906	3.1	745	52	17.75	655,310.08	10.17	10,000.00	240,467.39
1891	26,354	3.4	12,132	6.07	38,386	4.01	795	50	17.48	671,124.08	2.41	9,892.00	229,078.00
1892	27,398	4.3	12,280	1.21	39,678	3.36	845	50	18.26	724,521.93	7.95	9,602.00	220,344.47

a Decrease.